Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name:	School District/Independent School Authority Number (e.g. SD43, Authority #432):
Developed by: The Provincial Resource Centre for the Visually Impaired (PRCVI) and BC O&M Specialists, based on collaborative work between PRCVI and Charlene Haugen, O&M Specialist, Surrey Schools (SD36)	**Date Developed:**
School Name:	**Principal's Name:**
Superintendent Approval Date (for School Districts only):	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date:	**Board/Authority Chair Signature:**
Course Name:	**Grade Level of Course:**
Number of Course Credits:	**Number of Hours of Instruction:**

Board/Authority Prerequisite(s): None.

Special Training, Facilities or Equipment Required:

This course must be taught by a qualified Orientation and Mobility (O&M) specialist who is proficient in teaching the skills, knowledge, and techniques to facilitate safer and more effective travel for individuals with visual impairments. The British Columbia Ministry of Education requires that the Orientation and Mobility specialist meet the standards established by the Association for the Education and Rehabilitation of the Blind and Visually Impaired (AER), which require:

- A master's degree in Orientation and Mobility; or

- Completion of post-graduate studies in Orientation and Mobility, which include at least 350 hours of supervised practice in orientation and mobility involving individuals with a variety of visual impairments.

Facilities and equipment will vary depending on individual student needs and will be determined by the orientation and mobility specialist.

Course Synopsis:

Orientation and Mobility 11 is designed for students who have low vision or who are blind and require instruction in O&M skills and techniques to achieve the highest level of independent travel that is possible given the student's individual capacity. As students progress through the course, they will develop the skills, knowledge, confidence, and motivation required to travel independently, safely, efficiently, and gracefully in familiar and unfamiliar indoor environments and in outdoor areas in the community. Students will develop an awareness of the responsibilities involved in travelling independently and will develop a robust toolkit of O&M knowledge, strategies, and technology. As students advance through the course, they are encouraged to assume greater responsibility in advocating for O&M supports as a student with a visual impairment and will begin taking the steps needed to explore new environments independently while making appropriate decisions about safer and more efficient travel.

Goals and Rationale:

Orientation and Mobility, often abbreviated as O&M, refers to age-appropriate and ongoing instruction in the skills, techniques, and knowledge required for visually impaired individuals to travel safely, efficiently, gracefully, and with as much independence as possible in a variety of environments.

"Orientation" refers to the ability to know where one is located in space, one's target location, and the most efficient route to arrive at that location.

"Mobility" refers to the set of skills required to travel safely, efficiently, and effectively from one place to another across a variety of indoor and outdoor environments.

Independent, safe, efficient, and graceful travellers have well-developed orientation and mobility skills, as well as the confidence and motivation to apply their skills to travel in a variety of environments. To become independent travellers, students with visual impairments require direct instruction in O&M techniques and concepts. Through varied and extensive opportunities to develop, practice, and experiment with the use of these skills, students are better positioned for more meaningful engagement in their communities in their school and community lives.

Aboriginal Worldviews and Perspectives:

Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.

- Students with visual impairments acquire O&M knowledge and skills so that they may travel in an increasingly safer, effective, and graceful manner. For these learners, an effective O&M skillset supports physical health and well-being and promotes access to a broader range of opportunities for interactions in the community.

Learning involves patience and time.

- O&M programming requires a highly personalized approach to learning and is only effective when grounded in authentic environments that are meaningful to the learner. O&M concepts develop over time in a manner that mirrors the individual learner's requirements for independent travel with the instructor gradually shifting the responsibility for safer and more effective travel from others (e.g., parents, teachers) to the student.

Learning requires exploration of one's identity.

- Over the course of an O&M program, the student will reflect on their own strengths and challenges and through accurate self-knowledge will match their current O&M skillset to the travel demands in their daily lives.

Learning is embedded in memory, history and story.

- Changes in the physical environment impact all learners. However, students with visual impairments must interact directly with these changes as they navigate the environment. Therefore, a keen sense of history and memory for what came before is critical to the O&M skillset.

BIG IDEAS

Independent travel requires a variety of mobility techniques.	Effective exploration of the environment requires multi-sensory efficiency.	Developing and maintaining an accurate understanding of travel environments and spatial relationships are essential skills.	Development of travel techniques is an ongoing process that increases in complexity across environments.	Communication and personal safety are essential for independent travel.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: Develop personal awareness and responsibility: • Use mobility aids to gather environmental information. • Travel flexibly and independently across a variety of environments. Use critical and reflective thinking: • Develop strategies for orienting to an unfamiliar route or environment. • Use an allocentric frame of reference to apply positional and relationship concepts to an area, intersection, or route. • Gather and integrate information from a variety of senses in the analysis or completion of an O&M task.	*Students are expected to know the following:* Environmental concepts: • Understand concepts about indoor and outdoor travel and the community and region in which one lives. Public transportation: • Develop knowledge and practice use of a variety of local transportation modes (e.g., walking, carpool, taxi, bus, train). Personal safety and communication: • Understand personal safety concepts and safety precautions in various situations. • Understand and apply appropriate communication methods.

Big Ideas – Elaborations

Independent travel requires a variety of mobility techniques.
- The depth of understanding of the student's surroundings contributes to the development of the student's O&M skillset.
- Effective spatial cognition supported by accurate and meaningful concepts of the self in relation to the environment provides a foundation for more advanced O&M skills and techniques.
- The development of increasingly elaborate environmental concepts is required as students travel in more complex and unfamiliar environments across time.

Effective exploration of the environment requires multi-sensory efficiency.
- Continual skill development in the use of tools and devices that extend and enhance sensory access to the environment is required for travel with greater independence.
- Systematic evaluation and integration of sensory information supports the development of advanced O&M concepts.
- A multisensory approach to planning, analyzing, and executing route travel is most effective when students are able to maximize input through available sensory channels (e.g., visual, vestibular, tactile).

Developing and maintaining an accurate understanding of travel environments and spatial relationships are essential skills.
- Cognitive mapping/spatial updating are supported using human guide, maps, models, tactile diagrams, and other manipulatives as students tangibly represent travel environments.
- Tangible representations (e.g., maps) provide students with an important means of accessing spatial relationships between landmarks and objects in familiar and unfamiliar areas.
- The ability to produce one's own tangible representations (e.g., models) is an essential skill for students as they assume greater independence for learning to navigate more complex and unfamiliar travel environments.

Development of travel techniques is an ongoing process that increases in complexity across environments.
- O&M skills and techniques require consistent updating and elaboration as the student moves into more complex and unfamiliar travel environments.
- The student should maintain an ongoing motivation to refine his or her O&M skillset as the features of travel environments, including those that are most familiar, will change over time.
- New O&M techniques and technology are under continual development and the student should be an active and critical consumer of each.

Communication and personal safety are essential for independent travel.
- Accurate self-knowledge of the implications of visual impairment for safe and effective travel in the community supports greater self-determination in the application of the O&M skillset.
- Strategies for effective self-advocacy are required for increasingly independent travel across home, school, and community settings.
- Active problem solving and self-reflection promote the student's capacity to independently and critically evaluate the effectiveness of their own O&M skillset.

Curricular Competencies – Elaborations

Develop personal awareness and responsibility:
- Use mobility aids to gather environmental information.
  - Use mobility devices (cane, low vision devices) appropriately in a variety of environments and for a variety of tasks.

- o Demonstrate appropriate use of guide techniques across a variety of environments.
- Travel flexibly and independently in a variety of environments.
  - o Demonstrate safer street crossing procedures and traffic judgement at a variety of intersection types.
  - o Demonstrate strategies in scanning for cars, analyzing traffic flow, and timing for street crossing using a variety of auditory skills.
  - o Use strategies to establish, maintain, and monitor alignment and line of travel.
  - o Use appropriate techniques to anticipate and provide protection from environmental hazards.

Use critical and reflective thinking:
- Develop strategies for orienting to an unfamiliar route or environment.
  - o Use strategies (e.g., human guide, self-familiarization techniques, low vision devices) to orient to an unfamiliar environment.
  - o Decide what relevant information needs to be gathered before a trip (e.g., bus schedule, route review, cross streets) and use a variety of strategies and media to gather this information.
  - o Identify useful landmarks, cues, and clues while orienting to an unfamiliar environment.
- Use an allocentric (object-to-object) frame of reference to apply positional and relationship concepts to an area, intersection, or route.
  - o Use different means of representing environmental information (e.g., verbal description, maps in various media) to understand relationships between objects within the environment.
  - o Use compass directions and environmental cues (e.g., the sun) to remain oriented.
  - o Use logic and knowledge of numbering systems to find room numbers or addresses.
  - o Practice cognitive mapping (e.g. route shape) and spatial updating skills to remain oriented while moving through the environment with increasing independence or with a human guide.
- Demonstrate use of recovery strategies and hypothesis testing for re-orientation in indoor and outdoor environments. Gather and integrate information from a variety of senses in the analysis or completion of an O&M task.
  - o Use feedback through one sensory channel to confirm information obtained through another sensory channel.
  - o Recognize the situations and conditions where some sensory inputs may be more reliable than others.
  - o Use sound-distance and time-distance relationships to evaluate one's movement through an environment and determine when this information can be useful.

Content – Elaborations

Environmental concepts:
- Understand concepts about indoor and outdoor travel and the community and region in which one lives.
  - o Concepts related to roads and intersections (e.g., camber of road, traffic islands, traffic and bike lanes, types of intersections).
  - o Concepts related to topography (e.g., perimeter, incline/decline, kitty-corner).
  - o Concepts related to geographical settings (e.g., city districts, address systems).
  - o Patterns of vehicular movement (e.g. discrimination of vehicle flow, right-of-way).
  - o Patterns of pedestrian movement (e.g., crowds, pedestrian flow).

Transportation:
- Develop knowledge and practice use of a variety of local transportation modes (e.g., walking, carpool, taxi, bus, train, paratransit).

- o Understand the variety of transportation options and when and how to use each.
- o Knowledge of tools (e.g., phone, apps, websites) for route and trip planning.
- o Create contingency plans when travel cannot be executed as intended (e.g., calling taxi if bus breaks down).

Personal safety and communication:
- Understand personal safety concepts and safety precautions in various situations.
  - o Understand the effects of changing environmental conditions on safety and strategies for safety precautions (e.g., night, weather) and strategies for safety precautions.
  - o Take safety precautions into account when planning routes and developing contingency plans.
  - o Have an awareness of how to use safety resources specific to environment and mode of travel (e.g., public transit assistance and security, emergency contacts/resources, emergency procedures).
  - o Use strategies for taking personal safety into account when soliciting information or assistance.
  - o Assess the environment and intersections for safety risks and/or unsafe travel conditions and understanding safety strategies (e.g., flagging with cane, alternate routes, soliciting assistance).
- Understand and apply appropriate communication methods.
  - o Understand one's eye condition, how functional vision is affected by the environment, and how different environments or weather conditions may make some senses less reliable than others.
  - o Have a good knowledge of apps and phone numbers for getting local information.
  - o Communicate appropriate ways that the public can assist when soliciting help.

Recommended Instructional Components:

- encourage students to think creatively and critically, communicate skillfully, and demonstrate care for self and others
- acknowledge the social nature of learning;
- allow for both physical and virtual collaboration;
- support the personal aspect to learning;
- promote risk-taking, wonder and curiosity;
- build connections across and within areas of knowledge;
- embed formative assessment practices such as learning intentions, criteria, questions, descriptive feedback, self and peer assessment;
- inspire and stretch student thinking and problem solving;
- promote student engagement;
- reflect the relationships between emotion, motivation and cognition;
- connect learning to both local and global communities;
- provide opportunities for students to share learning and reflect;
- utilize technologies and other tools in purposeful ways;
- involve explicit and intentional teaching; and
- make learning visible, open, and transparent.

Recommended Assessment Components: Ensure alignment with the Principles of Quality Assessment

- Written examination of content knowledge
- Creation of a portfolio detailing students' acquisition of new tools encountered in the course

- Completion of a drop-off evaluation. The student will be "dropped-off" at a familiar location and must plan and execute their route to a predetermined familiar location. Instructor will supervise from a distance and step in only when safety may be compromised.
- Student self-assessment/reflection
- Direct observation
- Video recording of student travel
- Anecdotal records
- Instructor-developed checklists and rubrics
- Teaching Age-Appropriate Purposeful Skills (TAPS) 3rd Edition (Pogrund et al., 2012)

Learning Resources:

Briggs, J., Browns, B., Cowper, T., Lomond, D.C Mainland, J., Mitdal, P., Schwartz, L., Taylor, B., & Wardlow, N. (2000). *Framework for independent travel: A resource for Orientation and Mobility instruction.* B.C. Ministry of Education.

Fazzi, D., Barlow, J (2017). *Orientation and Mobility techniques: A guide for the practitioner.* (2nd ed). New York: American Foundation for the Blind.

Fazzi, D. L., & Naimy, B. J. (2010). Chapter 8: Teaching orientation and mobility to school-age children. In W. R. Wiener, R. L Welsh, & B. B. Blasch (Eds.) *Foundations of orientation and mobility* (pp. 208-262). New York, NY: AFB Press.

Fazzi, D., Petersmeyer, B., (2001). *Imagining the possibilities: Creative approaches to Orientation and Mobility instruction for persons who are visually impaired.* New York: American Foundation for the Blind.

Jacobson, W. H. (2013). *The art and science of teaching Orientation and Mobility to persons with visual impairments.* New York, NY: AFB Press.

Pogrund, RL, & Griffin-Shirley, N.(Eds.).(2018). *Partners in O&M: Supporting orientation and mobility for students who are visually impaired.* Louisville, KY: American Printing House for the Blind

Pogrund, R., Sewell, D., Anderson, H., Calaci, L., Cowart, M., Gonzalez, C., Marsh, R., Roberson-Smith, B., (2012). *TAPS: An Orientation and Mobility curriculum for students with visual impairments.* Texas: Texas School for the Blind.

Sauerburger, D. (n.d.) Street Crossing Website/Resource. Accessed at www.sauerburger.org

Assessment Resources:

Briggs, J., Browns, B., Cowper, T., Lomond, D.C Mainland, J., Mitdal, P., Schwartz, L., Taylor, B., & Wardlow, N. (2000) *Framework for independent travel: A resource for Orientation and Mobility instruction.* B.C. Ministry of Education.

Pogrund, R., Sewell, D., Anderson, H., Calaci, L., Cowart, M., Gonzalez, C., Marsh, R., Roberson-Smith, B., (2012) *TAPS: An Orientation and Mobility curriculum for students with visual impairments.* Texas: Texas School for the Blind.